Message
_____

| | |
|---|---|
| **From:** | rev-team@google.com [rev-team@google.com] |
| on behalf of | Rikard Lindquist [rikardl@google.com] |
| **Sent:** | 11/10/2011 2:28:18 AM |
| **To:** | MAds [madsteam@google.com]; sochrox@google.com; global-partnerships-finance@google.com; Rev-team [rev-team@google.com] |
| **Subject:** | [Rev-team] Fwd: Today's AdX Boot Camp: Survey & Materials |
| **Attachments:** | Display Industry Slides.pptx |

For those of you wondering about how this whole display world fits together. Good deck attached

---------- Forwarded message ----------
From: **Raj Hathiramani** <rajhathi@google.com>
Date: Wed, Nov 9, 2011 at 14:22
Subject: Fwd: Today's AdX Boot Camp: Survey & Materials
To: MMAP Finance <mmapfinance@google.com>


A good refresher preso on the Display ecosystem and role of RTB through exchanges, from a training that Ling
and I attended today.

_____

Raj Hathiramani | Google | Media, Mobile & Platforms
rajhathi@google.com | 917-969-0725



---------- Forwarded message ----------
From: **Eileen Duffy** <eileenduffy@google.com>
Date: Wed, Nov 9, 2011 at 4:13 PM
Subject: Today's AdX Boot Camp: Survey & Materials
To: Alex Johnson <alexjohnson@google.com>, Anna Nguyen <annatn@google.com>, Ali Pasha
<apasha@google.com>, Barbara Petit <barbarap@google.com>, Inderpreet Sandhu <isandhu@google.com>,
Jai Krishnan <jkrishnan@google.com>, Brandon Jung <jungb@google.com>, Kariyushi Casper
<kariyushi@google.com>, Kiran Mathrani <kmathrani@google.com>, Ellen Ko <koe@google.com>, Ling
Hou <lhou@google.com>, Mary Ashley Amon <maryamon@google.com>, Matthew Conroy
<mattrc@google.com>, Martin Boulogne <mboulogne@google.com>, Mark Coppin <mcoppin@google.com>,
Raj Hathiramani <rajhathi@google.com>, Sanjey Sivanesan <sanjey@google.com>, Stacy French
<stacyfrench@google.com>, Tali Saar <talis@google.com>, Tim Soennichsen <tsoennichsen@google.com>


Hi, AdX Boot Camp attendees!

First: Thanks for taking a break from your usual schedules to attend today's training. I know it can be hard to
carve out time, so hopefully you were able to get something out of it.

If you could take 30 seconds to fill out a survey, I'd greatly appreciate it :)

Also, the deck for today's session is attached to this email.

Please feel free to contact me with questions about the "industry" today, or anytime.

Have a great day, and nice to meet you all!

--

Rikard Lindquist | Finance Mgr Strategic Partnerships | Office: +1 (650)214-0780 | Mobile: ████████████ | Google Inc

"If you received this communication by mistake, please don't forward it to anyone else (it may contain confidential or privileged information), please erase all copies of it, including all attachments, and please let the sender
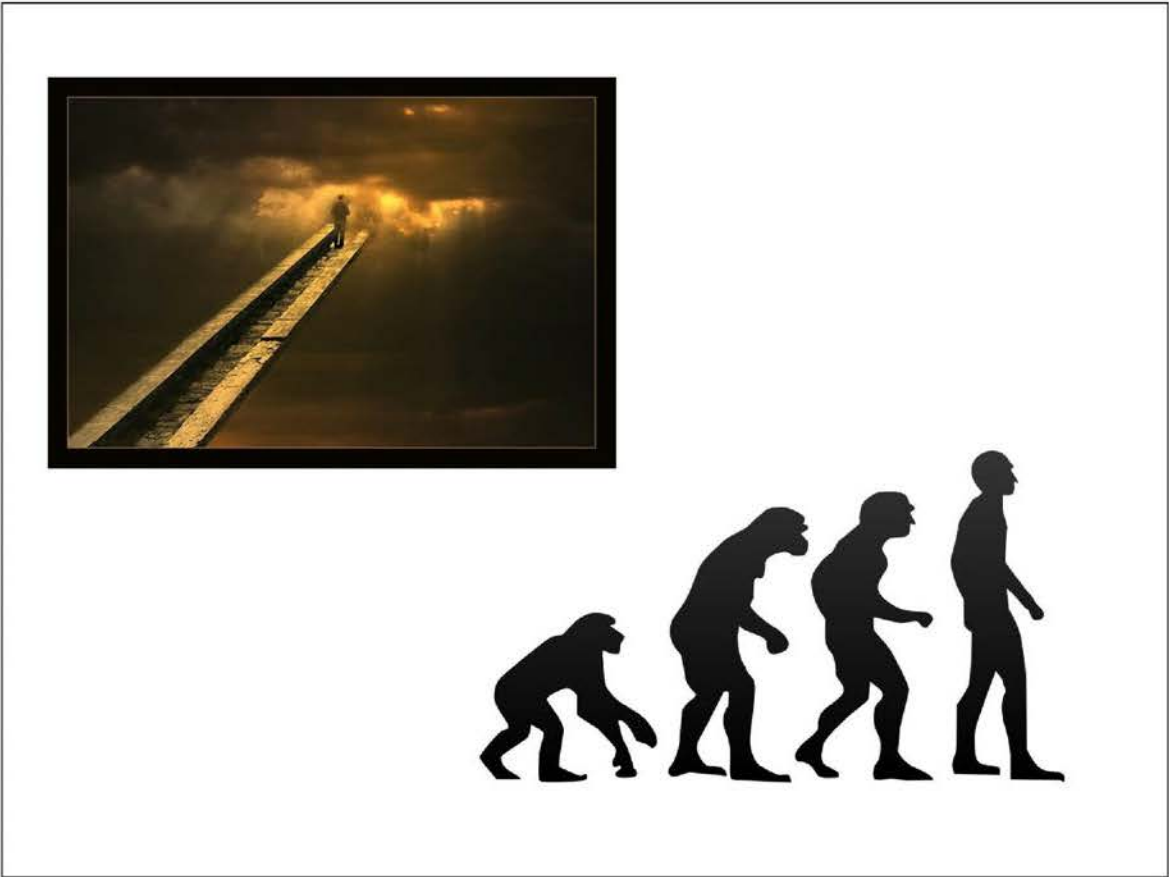
know it went to the wrong person.  Thanks."

--

You received this message because you are subscribed to the Google Groups "Rev-team" group.
To post to this group, send email to rev-team@google.com.
To unsubscribe from this group, send email to rev-team+unsubscribe@google.com.
For more options, visit this group at http://groups.google.com/a/google.com/group/rev-team/?hl=en.

# After today, you'll be able to:

- Tell a friend about the evolution of display media buying that led to the creation of ad exchanges and DSPs like Invite Media
- List key players in the current display industry, and state what each one does
- Describe how Ad Exchange ads end up on a publisher site, from dynamic allocation to real-time bidding to the auction

# In the beginning (well, the 1990s)…



publishers

advertisers
+
agencies

🔑 **reservation/direct buy:** an advertiser's purchase of inventory directly from a publisher's sales force, with an agreed-upon impression goal, budget, campaign dates, etc.

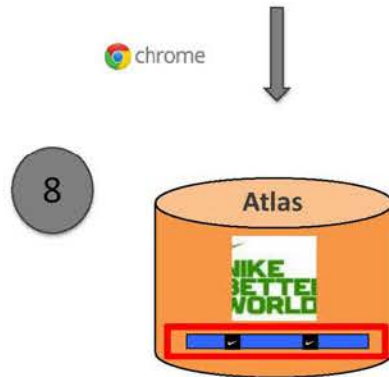🔑 **guaranteed inventory:** inventory directly sold by a publisher's sales force

# Review: Ad Serving

**7** Now, the browser sees another link, so it calls Atlas.

**9** Atlas returns the chosen creative, which appears on the user's screen.

**8** Atlas knows it needs a Nike ad. But which one? Which one will speak to someone on ESPN.com that lives in Nebraska?

NOTE: If DFP had chosen a DFA ad, it would have fetched the ad creative and served it to the page – there's no extra call required.
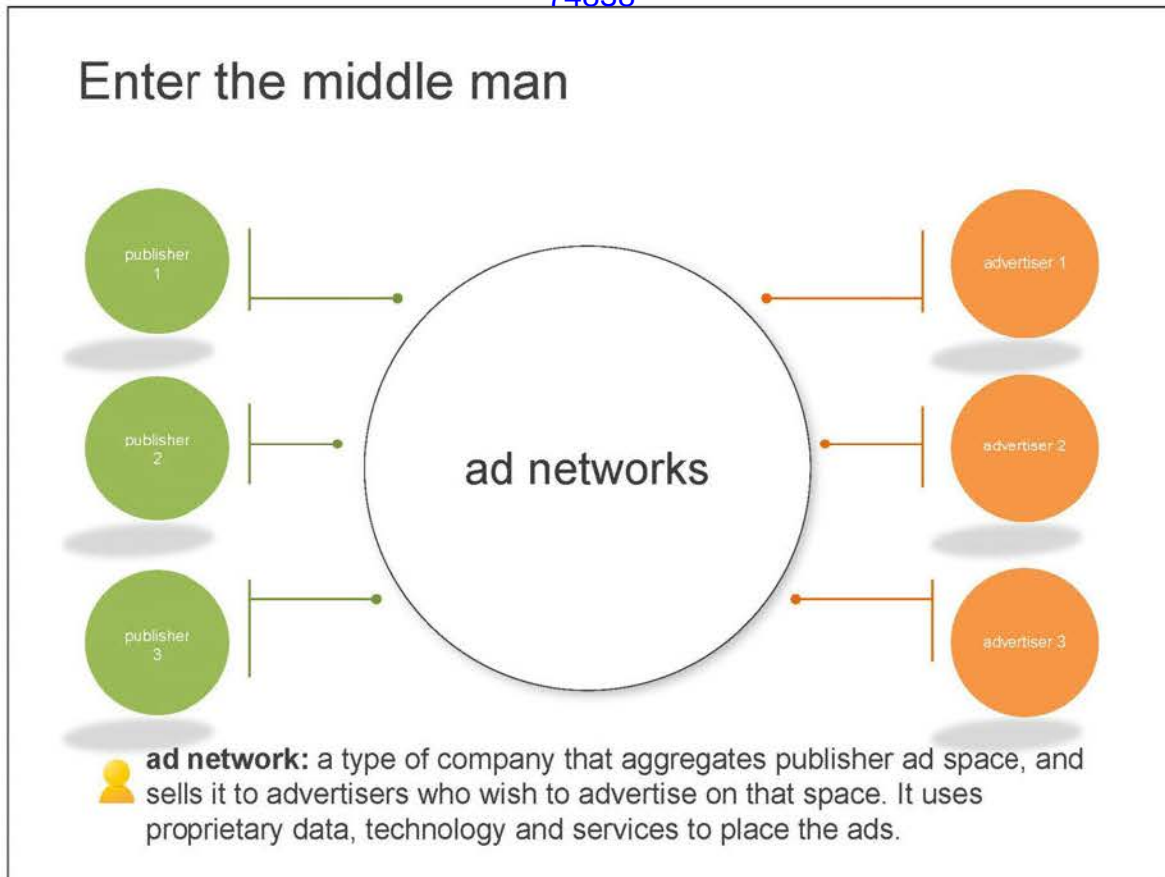
Google Confidential and Proprietary    8

# Enter the middle man

publisher 1

publisher 2

publisher 3

ad networks

advertiser 1

advertiser 2

advertiser 3

**ad network:** a type of company that aggregates publisher ad space, and sells it to advertisers who wish to advertise on that space. It uses proprietary data, technology and services to place the ads.

a good remnant solution
gave publishers access to a large range of advertisers
gave advertisers access to a large range of advertisers

Meet ad networks.

Advertising.com

adconion MEDIA GROUP

Glam Media

adroll

a good remnant solution
gave publishers access to a large range of advertisers
gave advertisers access to a large range of advertisers

# Ad Serving & Networks

**7** Now, the browser sees another link, so it calls the ad network.

**9** The ad network returns the advertiser ad tag to the browser.

chrome

**8**

ad network

http://DFA.com

http://atlas.com

The ad network, using its proprietary technology, selects an ad to show. This may be the ad creative itself, or a DFA ad tag.

http://DFA.com

Google Confidential and Proprietary   14

# Quiz!

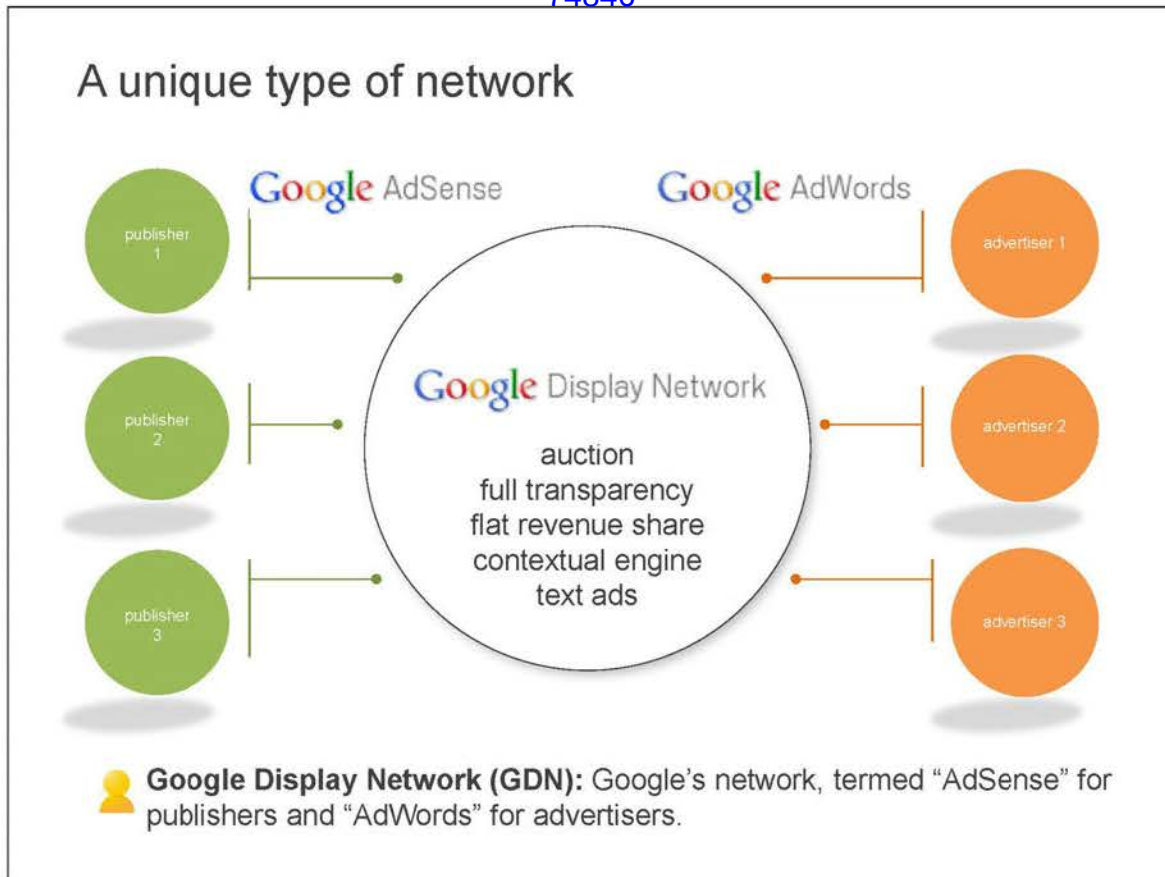What do you call inventory that's directly
sold from a publisher to an advertiser?

Guaranteed inventory

Ad network downsides

A unique type of network

**Google Display Network (GDN):** Google's network, termed "AdSense" for publishers and "AdWords" for advertisers.

a good remnant solution
gave publishers access to a large range of advertisers
gave advertisers access to a large range of advertisers

# Quiz!

## What is a downside of the traditional ad network model?

Lack of transparency
Proliferation
Daisy Chaining
Arbitrage

# A new middle man

publisher 1

publisher 2

publisher 3

## yield managers

improved yield thru technology
and manual effort
outsourced relationship
management
no daisy-chain

network 1

network 2

network 3

**yield manager:** a third party which manages buyers like ad networks on behalf of a publisher. Its goal is to increase overall yield for the publisher by allocating the publisher's available impressions among each buyer in an optimal fashion.

GOOG-DOJ-11899188

# Meet yield managers.



a good remnant solution
gave publishers access to a large range of advertisers
gave advertisers access to a large range of advertisers

# Ad Serving & Yield Managers

**4** The browser contacts ESPN's ad server (in this case, DFP) asking it for an ad.

Which advertisers are targeting where this user is located?
Which ad will make us the most money?
Which ads are behind schedule?

chrome

**DFP**
http://DFA.com
http://yieldmanager.com

**5** In this case, DFP contains – among other advertiser creatives and ad tags – a yield manager tag. As usual, DFP selects the ad source that should slow.

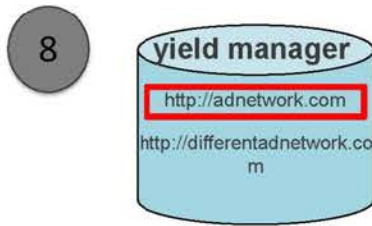**6** Once DFP has chosen an ad tag, it returns the tag to the browser.

http://yieldmanager.com
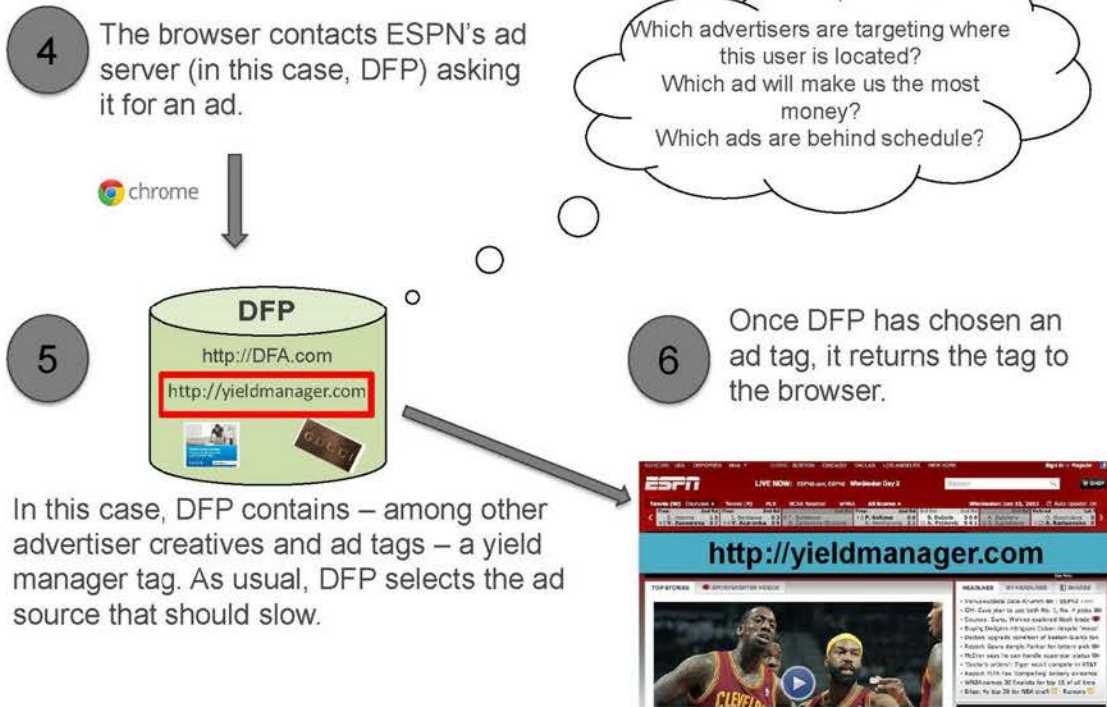
# Ad Serving & Yield Managers

**7** Now, the browser sees another link, so it calls the yield manager.

**9** The yield manager returns the ad network tag to the browser.

chrome

**8** yield manager

http://adnetwork.com
http://differentadnetwork.com

http://adnetwork.com

The yield manager compares all of the remnant sources, and selects the best one to show.

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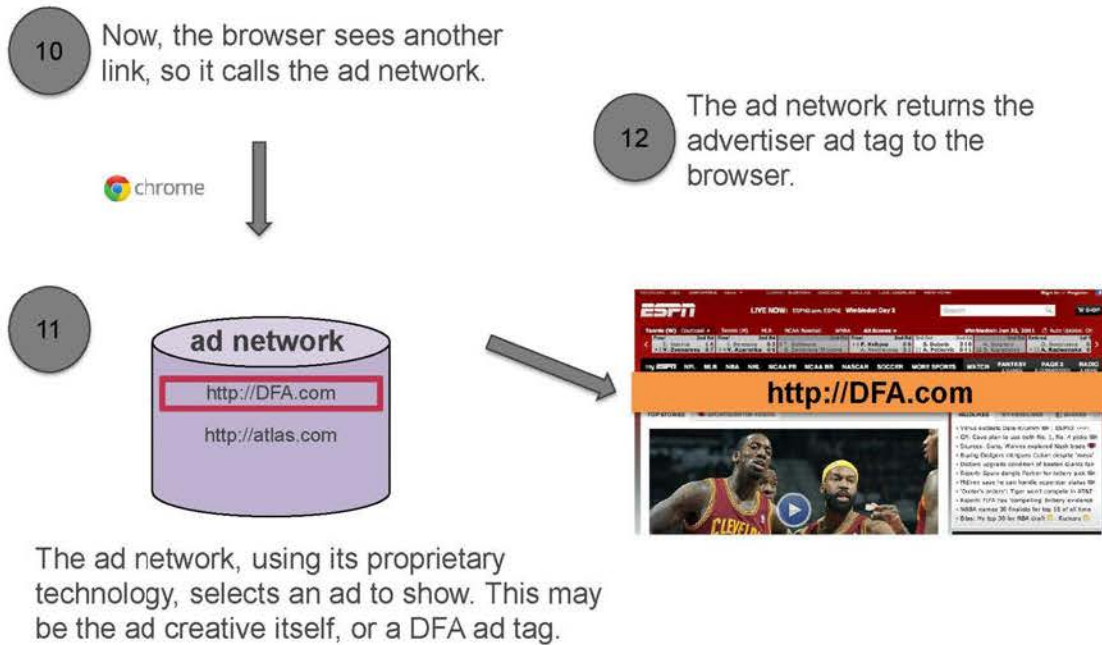
# Ad Serving & Yield Managers

**13** Now, the browser sees another link, so it calls DFA.

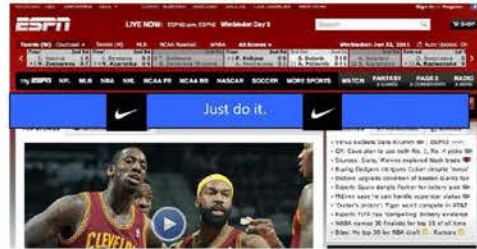**15** DFA returns the chosen creative, which appears on the user's screen.

**14** DFA

NIKE BETTER WORLD

DFA knows it needs a Nike ad. But which one? Which one will speak to someone on ESPN.com that lives in Nebraska?

Just do it.

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# Yield manager downsides

- One-sided (publisher-focused)
- Loss of control for publisher - didn't always know how or why yield managers were allocating $ the way that they were
- Yet another middle man between publisher and advertiser (taking yet another portion of each dollar)
- Didn't always yield more for publisher

# A new concept: the exchange

**ad exchange:** an auction-driven technology platform/marketplace that enables the buying and selling of ad inventory
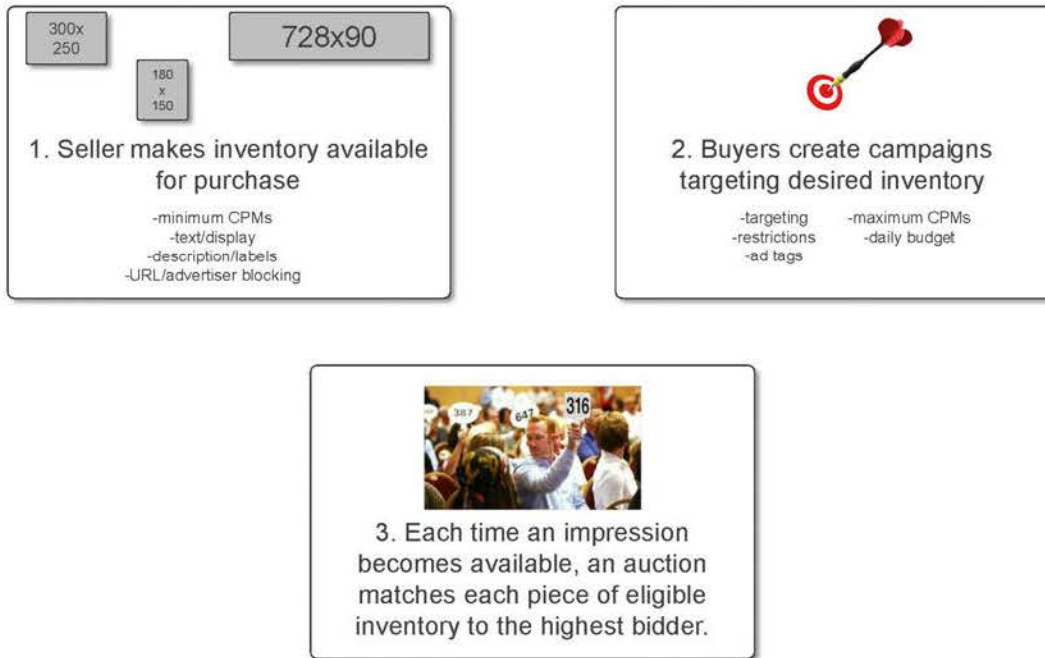
# Meet exchanges.

Microsoft Advertising Exchange

**right**media from YAHOO!

doubleclick ad exchange by Google

**✖ CONTEXTWEB**

a good remnant solution
gave publishers access to a large range of advertisers
gave advertisers access to a large range of advertisers

GOOG-DOJ-11899197

# Two options for buying on AdX

## User Interface (UI)



• Like in AdWords, buyers use UI to target desired inventory (sites, topics of sites, remarketing audiences)
• Enter static bids that, each time your ads are eligible, will be entered into the auction

AdWords differentiators:
• accounts correspond to buyers, campaigns to advertisers
• 3rd party ad serving easier
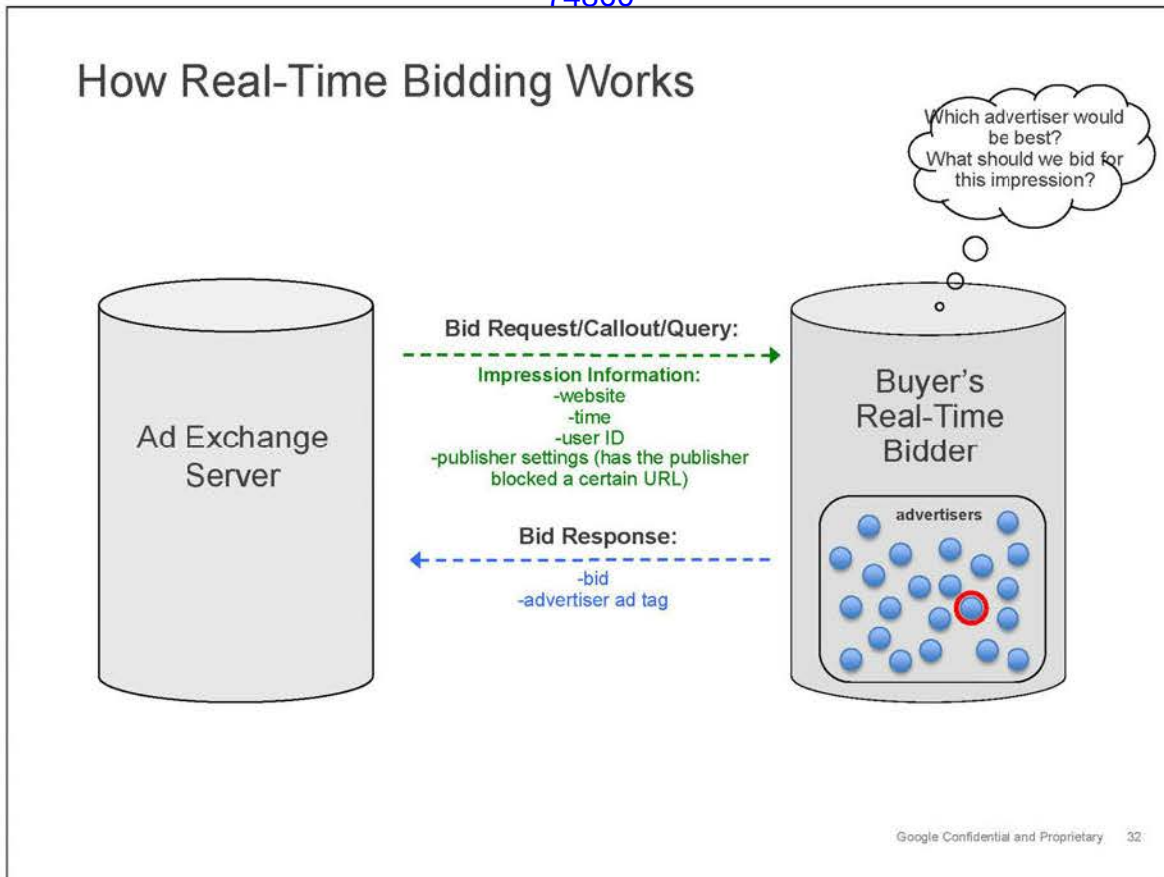• display-only
• CPM-only
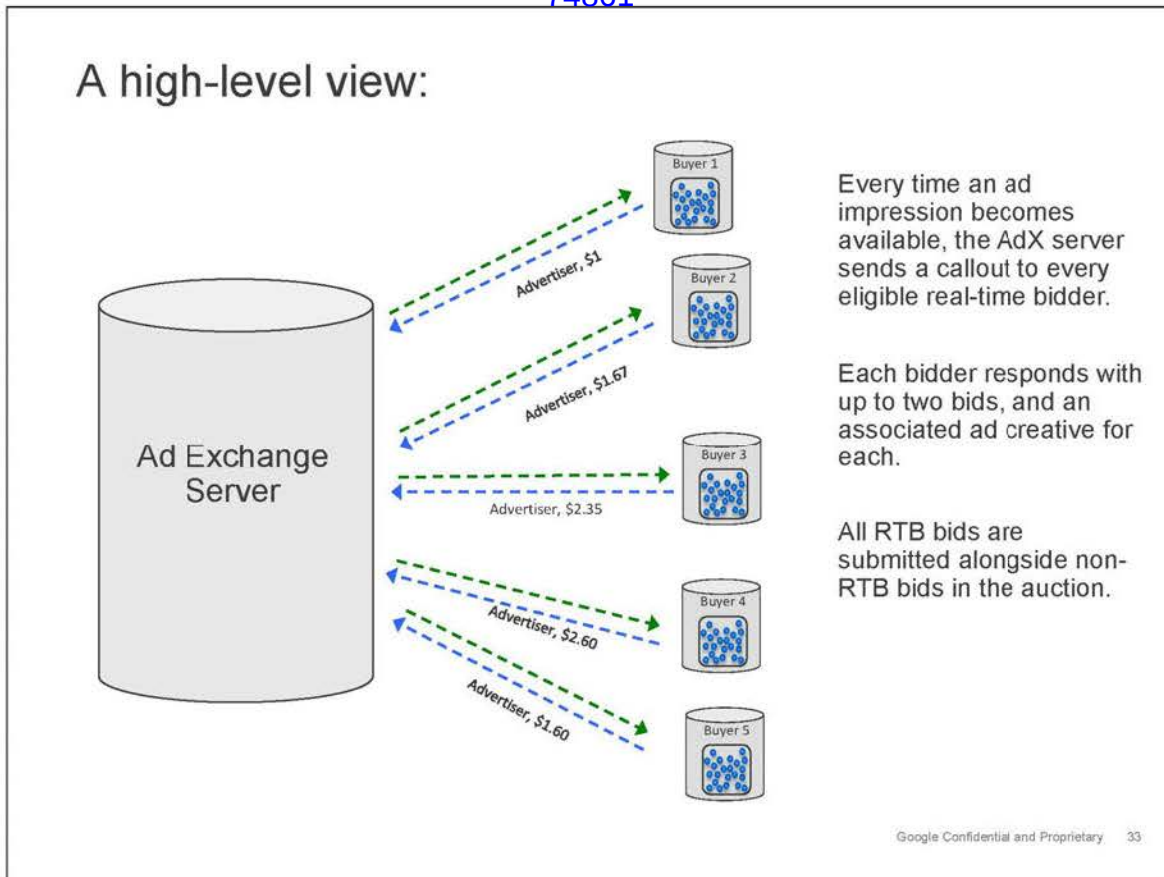• Importing of audience lists

## Real-Time Bidding



• Buyers create one, large, widely-targeted UI campaign, and enable it for real-time bidding
• Buyers set up a bidder to "listen to"/analyze every AdX impression
• Bidder's built-in decision logic selects an advertiser and a bid to submit for each auction. Bid is submitted alongside other static UI bids.
• Buyers can control the number of impressions they "listen to" by adjusting UI campaign settings

**real-time bidding**: an AdX feature whereby AdX sends a buyer information about an impression as it's happening. The buyers analyzes it, then returns a bid and ad tag to be submitted to the overall AdX auction.

How Real-Time Bidding Works

like using the exchange without a UI
like a firehose of impressions
buyer analyzes and responds in real time
being able to bid on every single impression. deciding whether or not u want it, at what price.
you also decide which advertiser makes the most sense for this impression
rather than UI, you have to bid on every single available one.

A high-level view:

Ad Exchange Server

Buyer 1

Advertiser, $1

Buyer 2

Advertiser, $1.67

Buyer 3

Advertiser, $2.35

Buyer 4

Advertiser, $2.60

Advertiser, $1.60

Buyer 5

Every time an ad impression becomes available, the AdX server sends a callout to every eligible real-time bidder.

Each bidder responds with up to two bids, and an associated ad creative for each.

All RTB bids are submitted alongside non-RTB bids in the auction.

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like using the exchange without a UI
like a firehose of impressions
buyer analyzes and responds in real time
being able to bid on every single impression. deciding whether or not u want it, at what price.
you also decide which advertiser makes the most sense for this impression
rather than UI, you have to bid on every single available one.

# The auction: First, pre-filtering.

**Date:** Thursday, June 30
**Time:** 11:15 p.m.
**Location:** San Diego, California
**User ID:** 23456
**Website:** espn.go.com
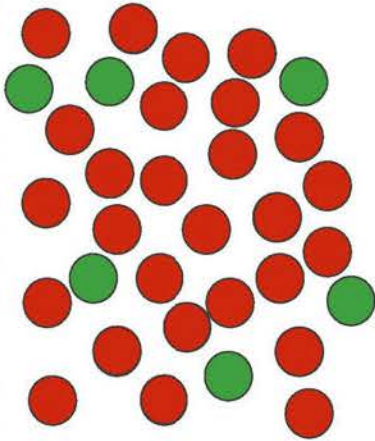
Ad Exchange then asks itself, out of all the campaigns in AdX, which are...

-active right now, and still have budget left?

-targeting San Diego, or area that includes San Diego?

-targeting espn.go.com, or a topic that the particular espn.go.com page fits into (i.e. sports), or targeting this particular user via an audience list?

-bidding at least $2, espn.go.com's minimum CPM?

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At top, add user id 12345 (cookie)
First, we filter out all campaigns that are not eligible for the auction.
targeting a topic that this PAGE would fit into

tie chosen at random

Quiz: Who wins, and at what price?

-maybe a tie
-

## Quiz: Who wins, and at what price?

## Publisher Minimum CPM: $2.00

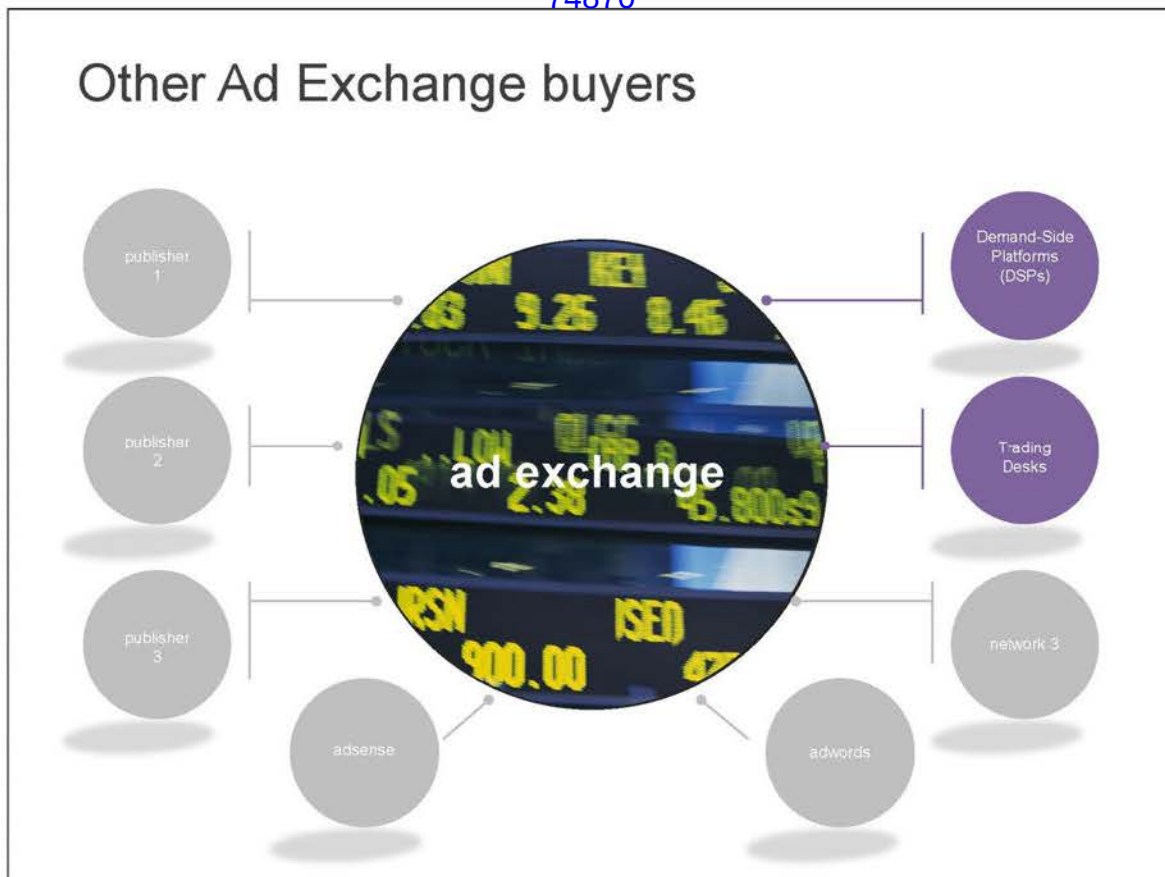If only one buyer is above the minimum CPM, the buyer pays that price.

Campaign 3
$1.60

Campaign 1
$2.25

Campaign 5
$1.69

Campaign 2
$1.70

Campaign 4
$1.72

Campaign 6
$1.68

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-maybe a tie
-

# Quiz!

What are two ways to buy on Ad Exchange?

1. Through the UI
2. Via real-time bidding
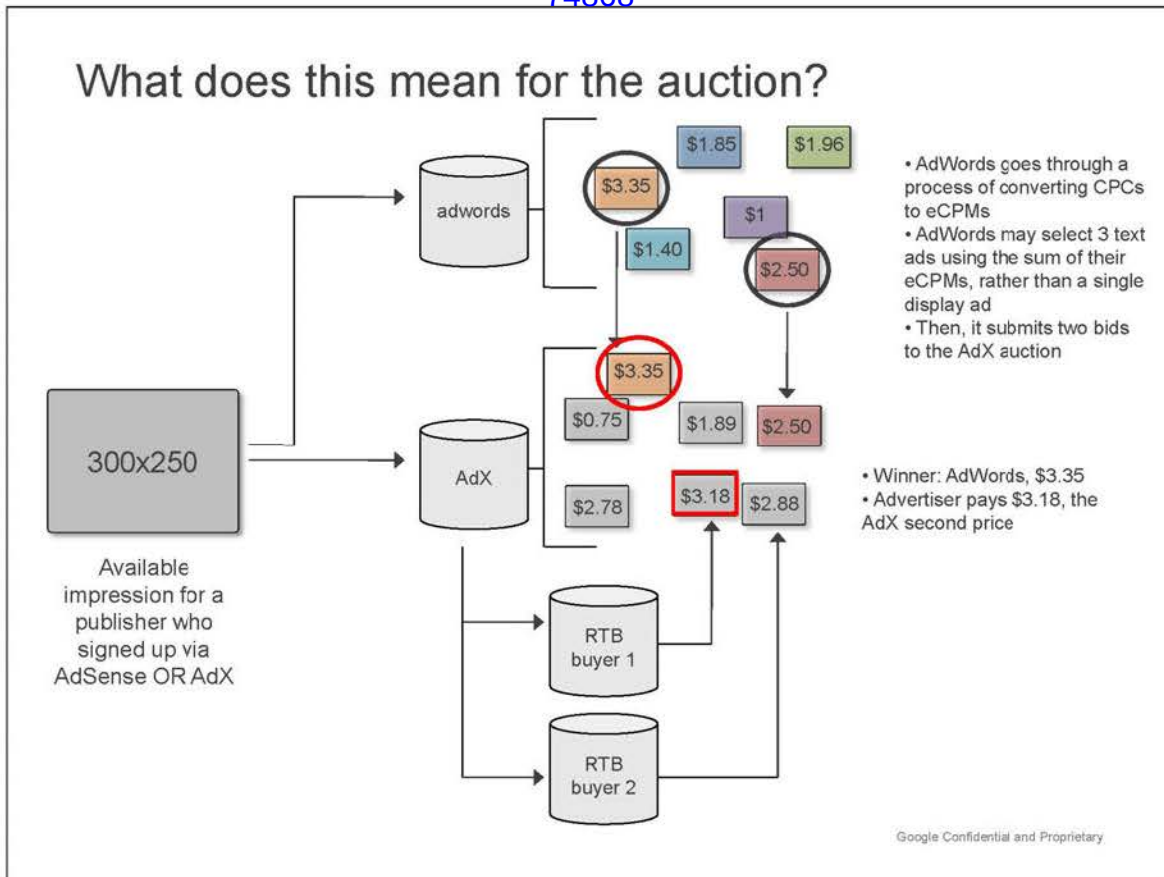
Revisiting the GDN

GOOG-DOJ-11899207

## What does this mean for the auction?

300x250

Available impression for a publisher who signed up via AdSense OR AdX

adwords

AdX

RTB buyer 1

RTB buyer 2

$1.85   $1.96
$3.35
$1
$1.40
$2.50
$3.35
$0.75   $1.89   $2.50
$2.78   $3.18   $2.88

• AdWords goes through a process of converting CPCs to eCPMs
• AdWords may select 3 text ads using the sum of their eCPMs, rather than a single display ad
• Then, it submits two bids to the AdX auction

• Winner: AdWords, $3.35
• Advertiser pays $3.18, the AdX second price

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At top, add user id 12345 (cookie)
First, we filter out all campaigns that are not eligible for the auction.
targeting a topic that this PAGE would fit into

Quiz: When would AdWords be the only eligible buyer (for either an AdX or AdSense publisher?)

Answer: When the publisher has indicated they only want **text ads** for this ad unit.

replace triggit w/turn (note: used to be an ad network), mediamath
for trading desks: add accuen, MIG, xaxis (GroupM/WPP)
highlight invite media in some way

# Other trends have emerged…



### Ad Networks with DSP capabilities

Ad networks have evolved their business models to offer real-time bidding options to their clients

rocketfuel

ValueClick

### Audience Data Companies

Data companies are able to gather audience information on the exchange, and sell the data to DSPs and ad networks for targeting purposes on the exchange.

eXelate

quantcast
It's your audience. We just find it.™

bluekai

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replace triggit w/turn (note: used to be an ad network), mediamath
for trading desks: add accuen, MIG, xaxis (GroupM/WPP)
highlight invite media in some way

# Quiz!

What's an example of a yield manager?

Rubicon
AdMeld
Pubmatic
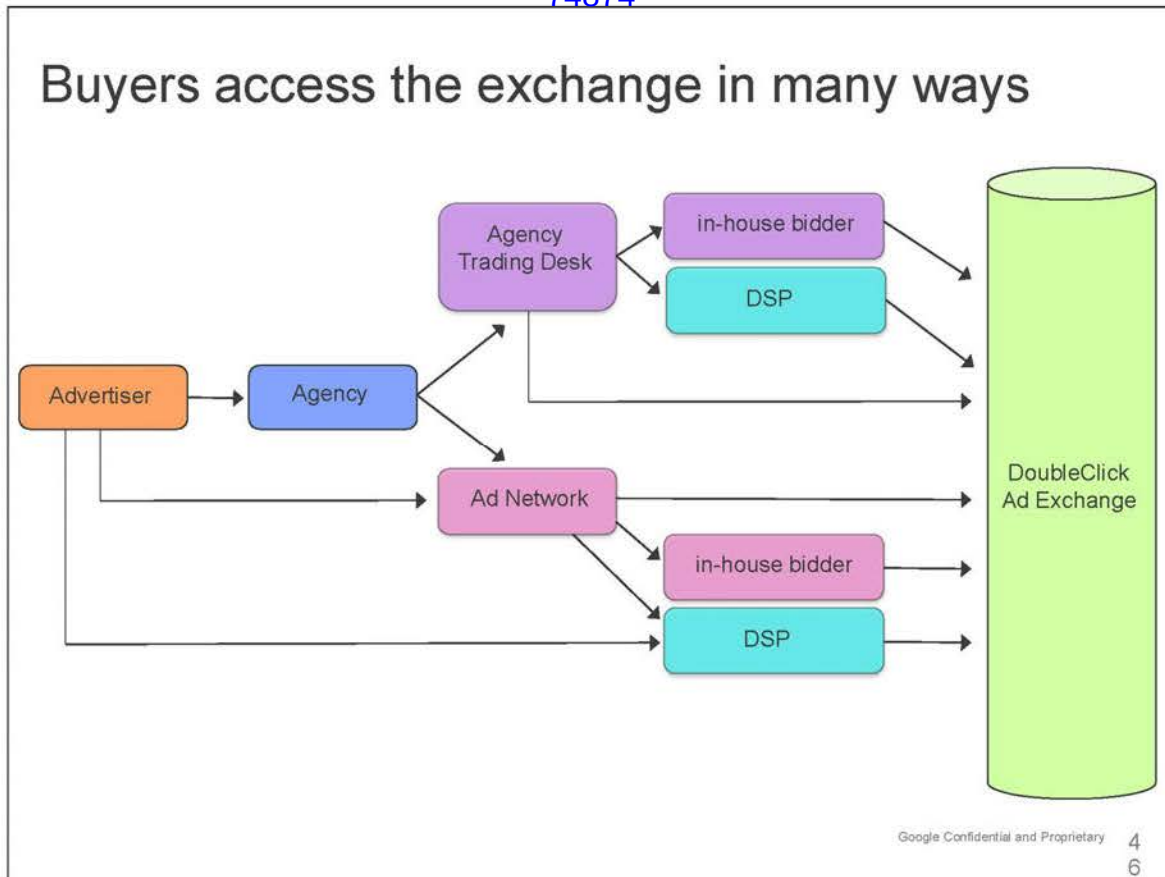
API
-mostly used for UI buys – see if we should incorporate that
UPDATE ANIMATION

# What about the publishers?

1. Create an ad unit in AdX.

> 728x90
> blocked: ford.com
> Run of Site, above-the-fold

2. Get the code for the ad unit



3. Add the code to your site, or into an ad server like DFP.

# Publisher Benefits: Anonymity

- Publishers can set their inventory to be **anonymous**, so they can protect their direct sales channel efforts (i.e. the advertisers who are buying directly won't know they can get the same inventory for cheaper on the exchange).

  🔑 **sales channel conflict**: The risk that advertisers who buy directly from publishers can get the same inventory for cheaper through other channels

- Publishers can also choose to make their inventory **anonymous unless the advertiser is bidding at least a certain CPM**. In this case, they'd set a low min CPM for anonymous, and a higher one for branded.

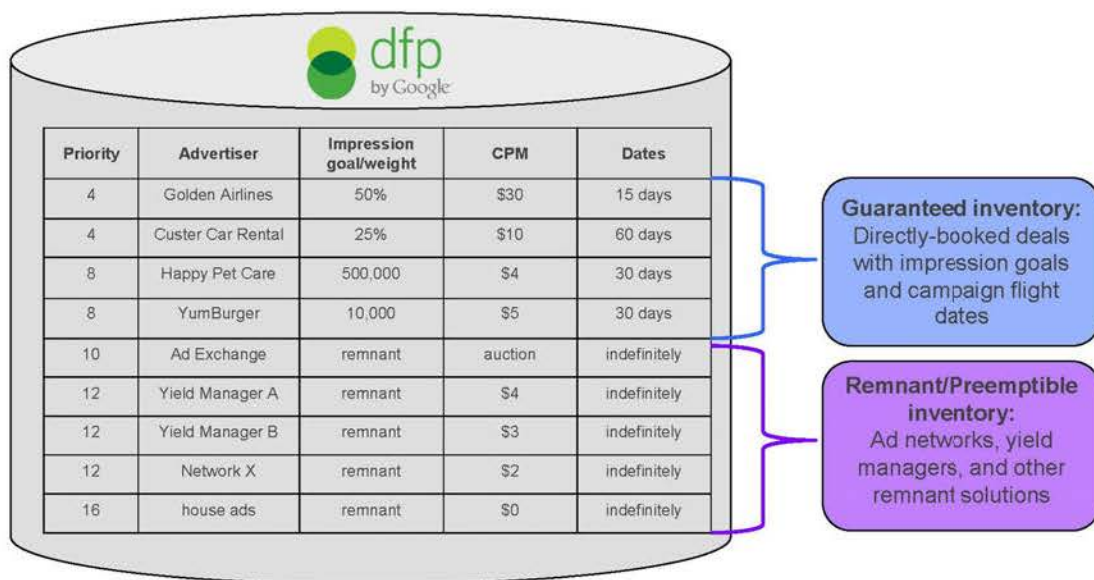| Branding Type | ○ Allow advertisers to target my inventory by site name/custom channel only |
| --- | --- |
| | ○ Allow advertisers to target my inventory by anonymous ID only |
| | ⊙ Allow advertisers to bid on my inventory both ways |
| Min CPM ⑦ | $ [_____]  (Min CPM when targeting by site name/custom channel) |
| | $ [_____]  (Min CPM when targeting by anonymous ID) |

# Quiz!

## What's a trading desk?

## A division at an agency holding company designated to manage exchange buying for all of the holding company's agencies

# Publisher Benefits: Dynamic Allocation

| Priority | Advertiser | Impression goal/weight | CPM | Dates |
|---|---|---|---|---|
| 4 | Golden Airlines | 50% | $30 | 15 days |
| 4 | Custer Car Rental | 25% | $10 | 60 days |
| 8 | Happy Pet Care | 500,000 | $4 | 30 days |
| 8 | YumBurger | 10,000 | $5 | 30 days |
| 10 | Ad Exchange | remnant | auction | indefinitely |
| 12 | Yield Manager A | remnant | $4 | indefinitely |
| 12 | Yield Manager B | remnant | $3 | indefinitely |
| 12 | Network X | remnant | $2 | indefinitely |
| 16 | house ads | remnant | $0 | indefinitely |

**Guaranteed inventory:** Directly-booked deals with impression goals and campaign flight dates

**Remnant/Preemptible inventory:** Ad networks, yield managers, and other remnant solutions

**dynamic allocation**: A yield maximization feature within DFP which dictates that an AdX ad only serves if the price – calculated in real time – can beat the sources prioritized below it.

Dynamic Allocation: How it works
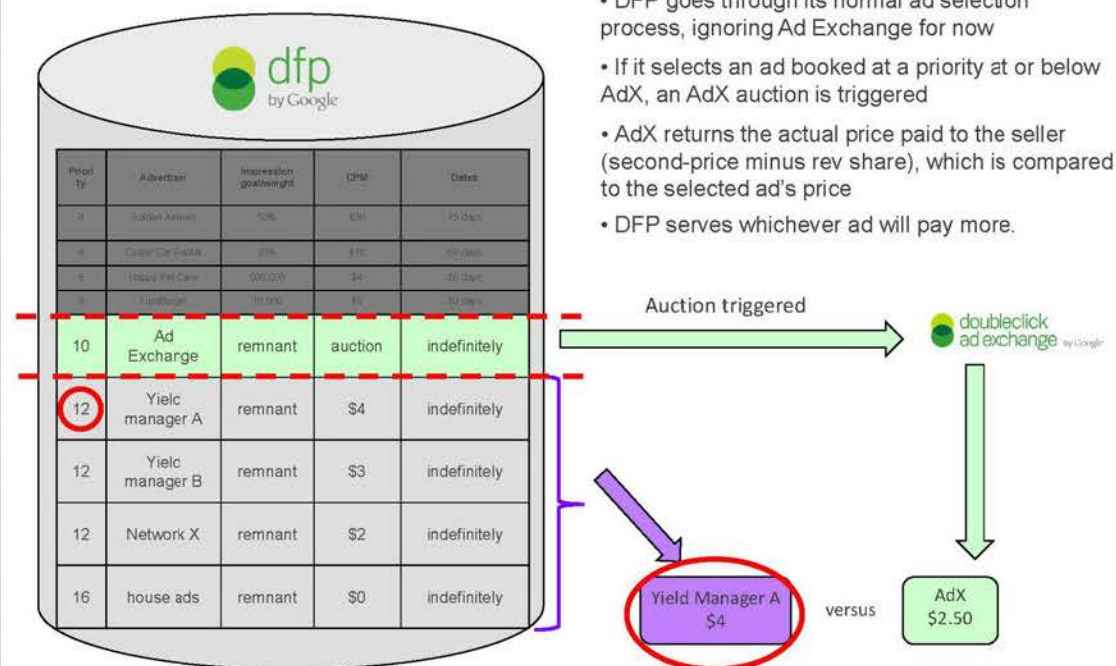
# Putting it all together

**4**   The browser contacts ESPN's ad server (in this case, DFP) asking it for an ad.

Which advertisers are targeting where this user is located?
Which ad will make us the most money?
Which ads are behind schedule?

chrome

**DFP**
http://adx.com
http://yieldmanager.com

**5**

**6**   Because there is an AdX tag booked above http://yieldmanager.com, an AdX auction is triggered.

In this case, DFP contains – among other advertiser creatives and ad tags – an ad exchange tag. As usual, DFP selects the ad that should show.
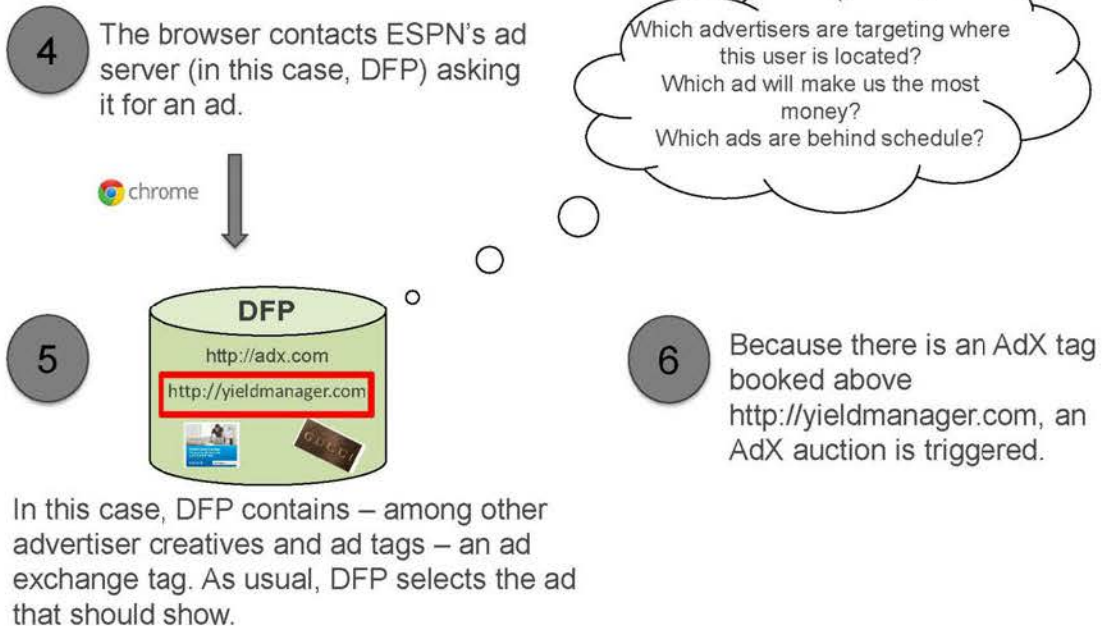
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# Putting it all together

**7** AdWords runs its auction, and selects its two highest bidders. Meanwhile, AdX sends a "callout" to its real-time bidders. It also scans through its eligible UI campaigns. Eventually, the AdX UI campaigns, AdX real-time bids, and two highest AdWords bids enter the AdX auction.



**8** The AdX auction takes place. The highest bidder is chosen as the winner, and the second-highest price is noted.

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# Putting it all together

**9** AdX sends the price paid by the winner – the second price minus the rev share – to see if it can beat the http://yieldmanager.com price.

**10**



DFP

AdX: $3.24
vs
Yield Manager: $3.08

http://DFA.com

If AdX can beat the price, AdX sends the winning ad creative – or ad tag – back to the browser. Usually, it's an ad tag.

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# Putting it all together

**11** Now, the browser sees another link, so it calls DFA.

chrome

**13** DFA returns the chosen creative, which appears on the user's screen.
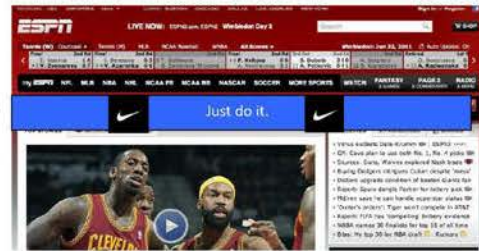
**12**

DFA

NIKE BETTER WORLD

DFA knows it needs a Nike ad. But which one? Which one will speak to someone on ESPN.com that lives in Nebraska?

Just do it.

Google Confidential and Proprietary    56

# Quiz!

What feature in DFP only shows the AdX ad if (a) DFP chooses an ad booked below AdX and (b) the price paid to the publisher from AdX can beat the price of the ad DFP has selected?

## Dynamic Allocation

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GOOG-DOJ-11899225